



Louisville Metro Air Pollution Control District  
701 West Ormsby Avenue, Suite 303  
Louisville, Kentucky 40203-3137



## Federally Enforceable District Origin Operating Permit (FEDOOP)

Permit No.: O-0333-20-F

Plant ID: 0333

Effective Date: 08/27/2020

Expiration Date: 08/31/2025

Permission is hereby given by the Louisville Metro Air Pollution Control District to operate the process(es) and equipment described herein which are located at:

Source: V.G. Reed & Sons, Inc.  
1002 South 12<sup>th</sup> Street  
Louisville, KY 40210

Owner: V.G. Reed & Sons, Inc.  
1002 South 12<sup>th</sup> Street  
Louisville, KY 40210

The applicable procedures of District Regulation 2.17 regarding review by the U.S. EPA and public participation have been followed in the issuance of this permit. Based on review of the application on file with the District, permission is given to operate under the conditions stipulated herein. If a renewal permit is not issued prior to the expiration date, the owner or operator may continue to operate in accordance with the terms and conditions of this permit beyond the expiration date, provided that a complete renewal application is submitted to the District no earlier than twelve (12) months and no later than ninety (90) days prior to the expiration date.

Emission limitations to qualify for non-major status:

Pollutant:	VOC	Single HAP	Total HAP
Tons/year:	< 25	< 5	< 12.5

Application No.: See **Application and Related Documents** table.

Public Notice Date: 07/24/2020

Permit writer: Yiqiu Lin



Air Pollution Control Officer  
8/27/2020

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**FEDOOP Permit Revisions/Changes**

<b>Permit No.</b>	<b>Public Notice Date</b>	<b>Issue Date</b>	<b>Change Type</b>	<b>Description/Scope</b>
173-01-F	6/3/2001	11/5/2001	Initial	Initial permit issuance
O-0333-15-F	7/31/2015	9/8/2015	Renewal	Scheduled permit renewal to include addition of newly installed equipment and removal of existing equipment.
O-0333-15-F (R1)	8/2/2019	9/3/2019	Sig.	Significant permit revision to remove performing stack test requirements on VOC control devices. Removed parts washer from IA list, and moved IA3 emission unit to U3 as this equipment is not an insignificant activity as it does not have a secondary reservoir. Removed Greenhouse Gas emission limits to comply with the U.S. Supreme Court's June 2014 opinion in Utility Air Regulatory Group v. EPA.
O-0333-20-F	7/24/2020	8/27/2020	Renewal	Permit renewal; permit format update; permit language update; re-assigned emission point ID for each equipment

**Construction Permit Summary**

<b>Permit No.</b>	<b>Issue Date</b>	<b>Description</b>
382-05-C	10/21/2005	Installation of Horizon bookbinding unit, model BQ-270
274-07-C	6/30/2008	Installation of Heidelberg press model SM 102-8-P+L
196-09-C	10/6/2009	Repurposing of bailer and cyclone
197-09-C	10/6/2009	Repurposing of PM filtering system
217-09-C	10/9/2009	Installation of Cyclone Engineering blast cabinet, model 3624, and bag filter system, model DC-1500
156-09-C (R1)	10/31/2009	Installation of King press, model 1-LG-50-166
219-09-C	10/31/2009	Installation of dryer and Airtex "3.0" RTO
71-10-C	6/30/2010	Installation of Megtec Systems dryer and Megtec Systems CTO, model Quantum 2000

### Application and Related Documents

Document Number	Date	Description
132390	2/20/2020	Correspondence related to FEDOOP renewal application
135752 & 135754	3/25/2020	Correspondence related to FEDOOP renewal application
137582	4/15/2020	FEDOOP renewal application AP-100A, 100B, 100P
152519	7/8/2020	Draft permit sent to company for review

## Abbreviations and Acronyms

AP-42	- AP-42, <i>Compilation of Air Pollutant Emission Factors</i> , published by U.S.EPA
APCD	- Louisville Metro Air Pollution Control District
BAC	- Benchmark Ambient Concentration
BACT	- Best Available Control Technology
Btu	- British thermal unit
CEMS	- Continuous Emission Monitoring System
CFR	- Code of Federal Regulations
CO	- Carbon monoxide
District	- Louisville Metro Air Pollution Control District
EA	- Environmental Acceptability
gal	- U.S. fluid gallons
GHG	- Greenhouse Gas
HAP	- Hazardous Air Pollutant
Hg	- Mercury
hr	- Hour
in.	- Inches
lbs	- Pounds
l	- Liter
LMAPCD	- Louisville Metro Air Pollution Control District
mmHg	- Millimeters of mercury column height
(M)SDS	- (Material) Safety Data Sheet
MM	- Million
NAICS	- North American Industry Classification System
NO <sub>x</sub>	- Nitrogen oxides
PM	- Particulate Matter
PM <sub>10</sub>	- Particulate Matter less than 10 microns
PM <sub>2.5</sub>	- Particulate Matter less than 2.5 microns
ppm	- parts per million
PSD	- Prevention of Significant Deterioration
psia	- Pounds per square inch absolute
QA	- Quality Assurance
RACT	- Reasonably Available Control Technology
SIC	- Standard Industrial Classification
SIP	- State Implementation Plan
SO <sub>2</sub>	- Sulfur dioxide
STAR	- Strategic Toxic Air Reduction
TAC	- Toxic Air Contaminant
UTM	- Universal Transverse Mercator
VOC	- Volatile Organic Compound
w.c.	- Water column
year	- Any period of twelve consecutive months, unless "calendar year" is specified
yr	- Year, or any 12 consecutive-month period, as determined by context

### **Preamble**

This permit covers only the provisions of Kentucky Revised Statutes Chapter 77 Air Pollution Control, the regulations of the Louisville Metro Air Pollution Control District (District) and, where appropriate, certain federal regulations. The issuance of this permit does not exempt any owner or operator to whom it has been issued from prosecution on account of the emission or issuance of any air contaminant caused or permitted by such owner or operator in violation of any of the provisions of KRS 77 or District regulations. Any permit shall be considered invalid if timely payment of annual fees is not made. The permit contains general permit conditions and specific permit conditions. General conditions are applicable unless a more stringent requirement is specified elsewhere in the permit.

### **General Conditions**

- G1. The owner or operator shall comply with all General Conditions herein and all terms and conditions in the referenced process/process equipment list.
- G2. All terms and conditions in this FEDOOP are enforceable by EPA, except those terms and conditions specified as District-only enforceable, and those which are not required pursuant to the Clean Air Act Amendments of 1990 (CAAA) or any of the Act's applicable requirements.
- G3. All application forms, reports, compliance certifications, and other relevant information submitted to the District shall be certified by a responsible official. If a change in the responsible official (RO) occurs during the term of this permit, or if an RO is added, the owner or operator shall provide written notification (Form AP-100A) to the District within 30 calendar days of such change or addition.
- G4. The owner or operator shall submit an annual compliance certification, signed by the responsible official, to the District, on or before April 15 of the year following the year for which the certification applies. This certification shall include completion of District Form 9440-O.
- G5. Periodic testing, instrumental monitoring, or non-instrumental monitoring, which may include record keeping, shall be performed to the extent necessary to yield reliable data for purposes of demonstrating continuing compliance with the terms and conditions of this permit.
- G6. The owner or operator shall retain all records required by the District or any applicable requirement, including all required monitoring data and supporting information, for a period of five years from the date of the monitoring, sampling, measurement, report, or application, unless a longer time period for record retention is required by the District or an applicable requirement. Records shall be retrievable within a reasonable time and made available to the District, Kentucky Division for Air Quality, or the EPA upon request.

- G7. The owner or operator shall provide written notification to the District, and receive approval, prior to making any changes to existing equipment or processes that would result in emissions of any regulated pollutant in excess of the allowable emissions specified in this permit.
- G8. This permit may be reissued, revised, reopened, or revoked pursuant to District Regulation 2.17. Repeated violations of permit conditions are sufficient cause for revocation of this permit. The filing of a request by the owner or operator for any reissuance, revision, revocation, termination, or a notification of planned changes in equipment or processes, or anticipated noncompliance shall not alter any permit requirement.
- G9. Except as otherwise specified or limited herein, the owner or operator shall not allow or cause the emissions to equal or exceed either 10 tons per year, or such lesser quantity as the EPA has established by rule, of any one Hazardous Air Pollutant (HAP) or 25 tons per year of all HAPs combined. Fugitive HAP emissions shall be included in this limit. HAPs are listed in section 112(b) of the CAAA and as amended in 40 CFR 63, Subpart C.
- G10. Except as otherwise specified or limited herein, the owner or operator shall not allow or cause the emissions to equal or exceed 100 tons per year of any regulated pollutant, including particulate matter, PM<sub>10</sub>, PM<sub>2.5</sub>, sulfur dioxide, carbon monoxide, nitrogen oxides, lead, hydrogen sulfide, gaseous fluorides, total fluorides, or Volatile Organic Compounds (VOC); any pollutant subject to any standard in District Regulation 7.02; or any substance listed in sections 112(r), 602(a) and 602(b) of the CAAA. Fugitive emissions shall be included in these limits for source categories listed in District Regulation 2.16.
- G11. Unless specified elsewhere in this permit, the owner or operator shall complete required monthly record keeping within 30 days following the end of each calendar month.
- G12. Unless specified elsewhere in this permit, the owner or operator shall submit semi-annual reports demonstrating compliance with the emission limitations specified. The report shall contain monthly and consecutive 12-month totals for each pollutant that has a federally enforceable limitation on the potential to emit. All reports shall include the company name, plant ID number, and the beginning and ending date of the reporting period. The compliance reports shall clearly identify any deviation from a permit requirement or a declaration that there were no such deviations. All compliance reports shall include the following per Regulation 2.17, section 3.5.
- A certification statement: "Based on information and belief formed after reasonable inquiry, I certify that the statements and information in this document are true, accurate, and complete", and
  - The signature and title of a responsible official of the company.

The semi-annual compliance reports are due on or before the following dates of each calendar year:

**Reporting Period**

January 1 - June 30

July 1 - December 31

**Report Due Date**

August 29

March 1 of the following year

- G13. The owner or operator shall comply with all applicable requirements of the following federally enforceable District Regulations:

<b>Regulation</b>	<b>Title</b>
1.01	General Application of Regulations and Standards
1.02	Definitions
1.03	Abbreviations and Acronyms
1.04	Performance Tests
1.05	Compliance With Emissions Standards And Maintenance Requirements
1.06	Source Self-Monitoring, Emission Inventory Development and Reporting
1.07	Excess Emissions During Startups, Shutdowns, and Upset Conditions
1.08	Administrative Procedures
1.09	Prohibition of Air Pollution
1.10	Circumvention
1.11	Control of Open Burning
1.14	Control of Fugitive Particulate Emissions
1.18	Rule Effectiveness
1.19	Administrative Hearings
2.01	General Application (Permit Requirements)
2.02	Air Pollution Regulation Requirements and Exemptions
2.03	Authorization to Construct or Operate; Demolition/Renovation Notices and Permit Requirements
2.04	Construction or Modification of Major Sources in or Impacting Upon Non-Attainment Areas (Emission Offset Requirements)
2.05	Prevention of Significant Deterioration
2.06	Permit Requirements – Other Sources
2.07	Public Notification for Title V, PSD, and Other Offset Permits; SIP Revisions; and Use of Emission Reduction Credits
2.09	Causes for Permit Modification, Revocation, or Suspension
2.10	Stack Height Considerations
2.11	Air Quality Model Usage
3.01	Ambient Air Quality Standards
4.01	General Provisions for Emergency Episodes
4.02	Episode Criteria
4.03	General Abatement Requirements
4.04	Particulate and Sulfur Dioxide Reduction Requirements
4.05	Hydrocarbon and Nitrogen Oxides Reduction Requirements
4.06	Carbon Monoxide Reduction Requirements
4.07	Episode Reporting Requirements
6.01	General Provisions (Existing Affected Facilities)
6.02	Emission Monitoring for Existing Sources

Regulation	Title
7.01	General Provisions (New Affected Facilities)

- G14. The owner or operator shall comply with all applicable requirements of the following District-only enforceable regulations:

Regulation	Title
1.12	Control of Nuisances
1.13	Control of Objectionable Odors
2.08	Emission Fee, Permit Fees and Permit Renewal Procedures
2.17	Federally Enforceable District Origin Operating Permits
5.00	Definitions
5.01	General Provisions
5.02	Adoption and Incorporation by Reference of National Emission Standards for Hazardous Air Pollutants
5.14	Hazardous Air Pollutants and Source Categories
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant
5.21	Environmental Acceptability for Toxic Air Contaminants
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant
5.23	Categories of Toxic Air Contaminants
7.02	Adoption and Incorporation by Reference of Federal New Source Performance Standards

- G15. The owner or operator shall submit emission inventory reports, as required by Regulation 1.06, if so notified by the District.
- G16. The owner or operator shall submit timely reports of abnormal conditions or operational changes that may cause excess emissions, as required by Regulation 1.07.
- G17. Applications, reports, test data, monitoring data, compliance certifications, and any other document required by this permit shall be submitted to:

***Air Pollution Control District  
701 W. Ormsby Avenue, Suite 303  
Louisville, Kentucky 40203-3137***

**Plantwide Requirements****Facility Description**

The source provides commercial printing and fulfillment services using lithographic printing presses and binding machines.

**Applicable Regulations**

<b>FEDERALLY ENFORCEABLE REGULATIONS</b>		
<b>Regulation</b>	<b>Title</b>	<b>Applicable Sections</b>
2.17	Federally Enforceable District Origin Operating Permits	1 through 9
7.25	Standard of Performance for New Sources Using Volatile Organic Compounds	3

<b>DISTRICT ONLY ENFORCEABLE REGULATIONS</b>		
<b>Regulation</b>	<b>Title</b>	<b>Applicable Sections</b>
5.00	Definitions	1, 2

### Plantwide Specific Conditions

#### S1. Standards

[Regulation 2.17, section 5.1]

##### a. HAP

- i. The owner or operator shall not allow or cause the plantwide emissions of any individual HAP to equal or exceed 5 tons during any consecutive 12-month period.  
[Regulation 2.17, section 5.1] [Regulation 5.00, section 1.13.5]
- ii. The owner or operator shall not allow or cause the plantwide emissions of all HAPs combined to equal or exceed 12.5 tons during any consecutive 12-month period.  
[Regulation 2.17, section 5.1] [Regulation 5.00, section 1.13.5]

##### b. PM/PM<sub>10</sub>/PM<sub>2.5</sub>

- i. The owner or operator shall not allow or cause the plantwide PM emissions to equal or exceed 25 tons during any consecutive 12-month period. [Regulation 5.00, section 1.13.5]
- ii. The owner or operator shall not allow or cause the plantwide PM<sub>10</sub> emissions to equal or exceed 25 tons during any consecutive 12-month period. [Regulation 5.00, section 1.13.5]
- iii. The owner or operator shall not allow or cause the plantwide PM<sub>2.5</sub> emissions to equal or exceed 25 tons during any consecutive 12-month period. [Regulation 5.00, section 1.13.5]

##### c. VOC

- i. The owner or operator shall not allow or cause the plantwide VOC emissions to equal or exceed 25 tons during any consecutive 12-month period. [Regulation 2.17, section 5.1] [Regulation 5.00, section 1.13.5]
- ii. The owner or operator shall store all VOC containing materials in closed containers when not in use. This includes materials such as inks, solvents, fountain solution, press cleaning materials, and waste materials including rags/wipes/paper used to clean press components.  
[Regulation 7.25, section (BACT), Permit 156-09-C (R1)]

#### S2. Monitoring and Record Keeping

[Regulation 2.17, section 5.2]

The owner or operator shall maintain the following records for a minimum of 5 years and make the records readily available to the District upon request.

**a. HAP**

- i. The owner or operator shall, monthly, maintain records of the name, quantity used, and HAP content for each of the following raw materials: inks, fountain solution concentrate, fountain solution additive, blanket wash, roller wash, press cleaning materials, and any other HAP containing material used during each calendar month and consecutive 12-month period.
- ii. The owner or operator shall maintain a copy of the material safety data sheet (MSDS) for each HAP-containing material used at this plant.
- iii. The owner or operator shall, monthly, calculate and record the monthly and 12-consecutive month emissions of total HAPs for each month during the reporting period using the methodology described in Attachment A – Calculation Methodology unless another methodology is approved in writing by the District.
- iv. The owner or operator shall, monthly, calculate and record the monthly and 12-consecutive month emissions of each single HAP for each month during the reporting period using the methodology described in Attachment A – Calculation Methodology unless another methodology is approved in writing by the District.

**b. PM/PM<sub>10</sub>/PM<sub>2.5</sub>**

- i. The owner or operator shall, monthly, calculate and record the monthly and 12-consecutive month emissions of PM/PM<sub>10</sub>/PM<sub>2.5</sub> for each month during the reporting period using the methodology described in Attachment A – Calculation Methodology unless another methodology is approved in writing by the District.

**c. VOC**

- i. The owner or operator shall, monthly, maintain records of the name, quantity used, and VOC content for each of the following raw materials: inks, fountain solution concentrate, fountain solution additive, blanket wash, roller wash, press cleaning materials, and any other VOC-containing material used during each calendar month and consecutive 12-month period.
- ii. The owner or operator shall maintain a copy of the material safety data sheet (MSDS) for each VOC-containing material used at this plant.

- iii. The owner or operator shall, monthly, calculate and record the monthly and 12-consecutive month emissions of total VOCs for each month during the reporting period using the methodology described in Attachment A – Calculation Methodology unless another methodology is approved in writing by the District.

### **S3. Reporting**

[Regulation 2.17, section 5.2]

The owner or operator shall report the following information, as required by General Condition G12:

#### **a. HAP**

- i. The total plantwide calendar month emissions and consecutive 12-month emissions of each individual HAP for each month in the reporting period.
- ii. The total plantwide calendar month emissions and consecutive 12-month emission of all HAPs combined for each month in the reporting period.

#### **b. PM/PM<sub>10</sub>/PM<sub>2.5</sub>**

- i. The total plantwide calendar month emissions and consecutive 12-month emission of all PM/PM<sub>10</sub>/PM<sub>2.5</sub> combined for each month in the reporting period.

#### **c. VOC**

- i. All compliance reports shall include the total plantwide calendar month VOC emissions and the total plantwide consecutive 12-month VOC emissions for each month in the reporting period.

**Emission Unit U1: Lithographic Printing Presses****Applicable Regulations**

<b>FEDERALLY ENFORCEABLE REGULATIONS</b>		
<b>Regulation</b>	<b>Title</b>	<b>Applicable Sections</b>
7.25	Standard of Performance for New Sources Using Volatile Organic Compounds	All

**Equipment**

<b>Emission Point</b>	<b>Description</b>	<b>Install Date</b>	<b>Applicable Regulations</b>	<b>Control ID</b>	<b>Release ID</b>
E1	King, 2-color, cold-set press, 22,000 sheet/hr. (King III)	11/1994	7.25	N/A	N/A
E2	King, 3020, 4-color, 25,000 sheet/hr., heat-set and cold-set process web offset printer with dryer rated at 4.4 MMBtu /hr. (King IV)	2/1997		C1 (CTO)	S1
E3	King, 2-color, cold-set press, 22,000 sheet/hr. (King V)	2/1997		N/A	N/A
E4	King, 2-color, cold-set press, 22,000 sheet/hr. (King VI)	11/1998		N/A	N/A
E5	King, F42-2-96-CNC-75, 4-color, 25,000 sheet/hr., heat-set and cold-set web press with dryer rated at 2.2 MMBtu/hr. (King VII)	11/2005		C2 (RTO)	S2
E6	Heidelberg, SM 102-8-P+L, 8-color, 15,000 sheet/hr., sheet-fed lithography press. (Heidelberg)	6/2008		N/A	N/A

**Control Devices**

<b>Control ID</b>	<b>Description</b>	<b>Control Efficiency</b>
C1	Megtec Systems “Quantum 2,000” catalytic thermal oxidizer installed in 2010, rated at 0.864 MMBtu/hr. (CTO)	95%
C2	Airex “3.0” regenerative thermal oxidizer installed in 2009, rated at 3.49 MMBtu/hr. (RTO)	99%

## U1 Specific Conditions

### S1. Standards

[Regulation 2.17, section 5.1]

#### a. HAP

- i. See Plantwide Requirements.

#### b. VOC

- i. See Plantwide Requirements.
- ii. The owner or operator shall not allow or cause the VOC emissions from King III (E1), King IV (E2), King V (E3), King VI (E4), and Heidelberg (E6) printing presses combined to exceed 20 tons per consecutive 12-month period. [Permit 0173-01-F]
- iii. The owner or operator shall operate and maintain the CTO (C1) at all times the King IV (E2) web press and associated dryer are in heat-set web operation. [Regulation 7.25, section 3 (BACT)]

The following shall ensure compliance with this operating requirement:

- (1) The owner or operator shall operate and maintain monitoring device that measures the gas temperature before the catalyst bed. [Regulation 7.25, section 3 (BACT)]
  - (2) The CTO (C1) shall operate at a temperature that ensures a 95% VOC destruction efficiency. The owner or operator shall monitor the inlet gas temperature to assure a minimum temperature of 650°F. [Regulation 7.25, section 3 (BACT)]
- iv. For the King VII (E5) printing press, the owner or operator shall not allow or cause the VOC emissions to exceed 10 tons during any consecutive 12-month period. [Permit 156-09-C (R1)]
  - v. The owner or operator shall operate and maintain the RTO (C2) at all times the King VII (E5) press and associated dryer are in heat-set web operation. [Regulation 7.25, section 3 (BACT)] [Permit 156-09-C (R1) & 219-09-C]
    - (1) The District has determined that the RTO (C2) and the following VOC standards represent Best Available Control Technology (BACT) for the King VII (E5) web printing press.<sup>1</sup> [Regulation 7.25, section 3 (BACT)] [Permit 156-09-C (R1)]

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<sup>1</sup> The District has determined that the thermal oxidizer and the use of raw materials that comply with the VOC standards specified in this permit represents BACT level of control for the King VII heatset web press.

<b>Raw Material</b>	<b>BACT Limit</b>
Conventional Inks	18% by weight VOC
Specialty Inks	25% by weight VOC and 10% of total ink usage
Fountain solution	1.6% by weight VOC, if the fountain solution contains alcohol and is not refrigerated. 3.0% by weight VOC, if the fountain solution contains alcohol and is refrigerated to 60°F or less. 5.0% by weight VOC, if the fountain solution contains no alcohol and is not refrigerated. 8.5% by weight VOC, if the fountain solution contains no alcohol and is refrigerated to 60°F or less.
Blanket Wash	70% by weight VOC as applied or vapor pressure $\leq$ 10 mm Hg at 68°F
Roller Wash	70% by weight VOC as applied or vapor pressure $\leq$ 10 mm Hg @ 68°F
Water-based Coatings	1.0 lb. VOC/gal as applied

- (2) The owner or operator shall install a temperature monitoring device equipped with a continuous recorder. The temperature monitoring device shall be installed in the combustion chamber or in the ductwork immediately downstream of the combustion chamber in a position before any substantial heat exchange occurs. All monitoring equipment shall be installed, calibrated, maintained, and operated according to manufacturers' specifications or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately. [Regulation 7.25, section 3 (BACT)]
- (3) The owner or operator shall monitor the combustion chamber temperature to assure a minimum temperature of 1,450°F. [Regulation 7.25, Section 3 (BACT)] [Permit 219-09-C]

## **S2. Monitoring and Record Keeping**

[Regulation 2.17, section 5.2]

The owner or operator shall maintain the following records for a minimum of five years and make the records readily available to the District upon request.

**a. HAP**

- i. See Plantwide Requirements.

**b. VOC**

- i. See Plantwide Requirements.
- ii. For press King III (E1), King IV (E2), King V (E3), King VI (E4), King VII (E5), and Heidelberg (E6), the owner or operator shall record the name, VOC content, and quantity used of each VOC containing material used during each calendar month and consecutive 12-month period.
- iii. For press King III (E1), King IV (E2), King V (E3), King VI (E4), and Heidelberg (E6), the owner or operator shall, monthly, keep records, including calculations, of all VOC emissions during each calendar month and consecutive 12-month period.
- iv. For the King web presses, the owner or operator shall determine the VOC content (as applied) of each batch of press-ready fountain solution by one of the following methods.
  - (1) The owner or operator shall determine the VOC content of each batch of press-ready fountain solution by calculation. The calculation shall be kept in a batch log. The owner or operator shall document any deviation from the standard fountain solution makeup. Any manual additions of VOC made after each fountain solution batch is prepared shall be documented and the VOC content of the fountain solution shall be calculated to demonstrate compliance with the as applied fountain solution standard specified in this permit. Documentation of any deviations or manual additions shall include the date and time of occurrence.
  - (2) Alternatively, a sample of the fountain solution (as applied) may be taken from the fountain solution tray or reservoir and measured with a hydrometer, refractometer, or conductivity meter. Within 30 days after the effective date of this permit, the owner or operator shall establish the appropriate compliance indicator ranges for each of the analytical methods above the source will use to demonstrate compliance with the fountain solution VOC content (as applied). The owner or operator shall analyze the VOC content each time a fresh batch of press ready fountain solution is prepared and after each time a VOC containing material is added to the fountain solution reservoir following the initial solution makeup. The owner or operator shall maintain daily records of the results of each observed reading including the date, time, and the name of the person who observed the reading.

- v. The owner or operator of a lithographic press using automatic cleaning equipment (e.g., blanket washers) that mixes the cleaning solution at the point of application and who must demonstrate the cleaning solution (as applied) complies with permit requirements shall:
  - (1) Operate, maintain, and calibrate the automatic feed equipment to regulate the volume of each cleaning solvent and water (or other non-VOC), as mixed; and
  - (2) Preset the automatic feed equipment so that the consumption rates of the cleaning solvents and water (or other non VOC), as applied, comply with permit requirements.
- vi. For each batch of blanket wash, roller wash, or other cleaning solution not prepared with automatic equipment, the VOC content of the cleaning solution (as applied) shall be determined by calculation. The calculation shall be kept in a batch log. The owner or operator shall document any additions of VOC or deviation from the standard cleaning solution makeup including the date and time of occurrence.
- vii. For the King IV (E2) associated CTO (C1), the owner shall comply with the following monitoring requirements to ensure compliance with 95% destruction efficiency when operating in heat-set mode:
  - (1) Maintain a monthly maintenance log for the control device and monitoring equipment that includes all maintenance performed, including dates and duration of any control device downtime or bypasses.
  - (2) Operate and maintain the oxidizer at all times the press is in heatset operation.
  - (3) Install and maintain monitoring device to measure the inlet gas temperature.
  - (4) Operate and maintain an electrical interlock between the web press and the catalytic oxidizer that automatically shuts down the associated heat-set press if the inlet gas temperature falls below 650°F.
  - (5) Record the inlet temperature once per operating day to demonstrate compliance permit conditions.
  - (6) Maintain daily records that identify all periods of bypassing the catalytic oxidizer while the King IV web press is in operation. The records shall include the date, duration (including the start and stop time) of each bypass event, a brief summary of the cause or reason for bypassing the thermal oxidizer, a description of the corrective action taken to minimize the extent and duration of each bypass event, the emissions of VOCs during each bypass event, and

- measures implemented to prevent reoccurrence of the situation that resulted in bypassing the catalytic oxidizer.
- (7) If the inlet gas temperature drops below the minimum allowed temperature for any time, the owner or operator must assume a 0% VOC removal efficiency for that time period when calculating VOC emissions from the associated press.
  - (8) If, during a reporting period month, the unit has not been run in heat-set mode a negative declaration shall be noted in the record.
- viii. For King VII (E5), the owner or operator shall, monthly, maintain records, including calculations which show the total VOC emissions during each calendar month and consecutive 12-month period.
- ix. For the King VII associated RTO (C2), the owner or operator shall comply with the following recordkeeping requirements when operating in heatset mode:
- (1) Maintain a monthly maintenance log for the thermal oxidizer and monitoring equipment that includes a description of any maintenance performed, repairs made, or replacement of any components.
  - (2) Install and maintain monitoring device to measure the combustion chamber temperature.
  - (3) Record the oxidizing chamber temperature once per operating day to demonstrate compliance with permit conditions.
  - (4) The owner or operator of the RTO shall monitor and maintain records that identify all periods of bypassing the thermal oxidizer while the King VII heat-set web press is in operation. The records shall include the date, duration (including the start and stop time) of each bypass event, a brief summary of the cause or reason for bypassing the thermal oxidizer, a description of the corrective action taken to minimize the extent and duration of each bypass event, the emissions of VOC during each bypass event, and measured implemented to prevent reoccurrence of the situation that resulted in bypassing the thermal oxidizer.
  - (5) If, during a reporting period month, the unit has not been run in heat-set mode a negative declaration shall be noted in the record.
  - (6) Operate and maintain an electrical interlock between the web press and the oxidizer that automatically shuts down the associated heat-set web press if the combustion chamber temperature falls below 1450°F.
  - (7) If the combustion chamber temperature falls below minimum standards for any time, the owner or operator must assume a 0%

efficiency of removal when calculating VOC emissions from the King VII press for that time.

### **S3. Reporting**

[Regulation 2.17, section 5.2]

The owner or operator shall report the following information, as required by General Condition G12:

#### **a. HAP**

- i. See Plantwide Requirements.

#### **b. VOC**

- i. See Plantwide Requirements.
- ii. For press King III (E1), King IV (E2), King V (E3), King VI (E4), and Heidelberg (E6), the semi-annual report shall include a summary of the monthly records, including calculations, of all VOC emissions during each calendar month and consecutive 12-month period.
- iii. For press King VII (E5), the semi-annual report shall include a summary of monthly records, including calculations which show the total VOC emissions during each calendar month and consecutive 12-month period.
- iv. For both the King IV (E2) associated CTO (C1) and the King VII (E5) associated RTO (C2), the semi-annual report must include the following information;
  - (1) Identification of all periods of bypassing the oxidizer while the associated press was in operation during a reporting period. Information about a bypass event shall include:
    - (a) The date, duration (including the start and stop time) of each bypass event,
    - (b) Identification of the control device and Emission Point,
    - (c) Total VOC emissions during each bypass event
    - (d) Summary information on the cause or reason for each bypass event,
    - (e) Corrective action taken to minimize the extent and duration of each bypass event, and
    - (f) Measures implemented to prevent reoccurrence of the situation that resulted in bypassing the thermal oxidizer.
  - (2) If there are no periods of bypassing the thermal oxidizer during a reporting period, the annual compliance report must include a

statement that there were no periods of bypassing the thermal oxidizer during the reporting period.

- v. For both the King IV (E2) associated CTO (C1) and the King VII (E5) associated RTO (C2), the semi-annual report shall include:
  - (1) Identification of all periods of operating below the minimum combustion chamber temperature standard for that equipment during a reporting period. Information about low temperature events shall include:
    - (a) Identification of the control device and Emission Point,
    - (b) The date of the excursion,
    - (c) The observed combustion chamber temperature,
    - (d) Corrective action taken to minimize the extent and duration of the excursion, and
    - (e) Measures implemented to prevent reoccurrence of the situation the resulted in operating below the minimum combustion chamber temperature.
  - (2) If there were no excursions during a reporting period, the annual compliance report must include a statement that there were no periods of excursions during the reporting.

**Emission Unit U2: Book Binder and Stitching Machines****Applicable Regulations**

<b>FEDERALLY ENFORCEABLE REGULATIONS</b>		
<b>Regulation</b>	<b>Title</b>	<b>Applicable Sections</b>
7.08	Standards of Performance for New Process Operations	3.1.1, 3.1.2
7.25	Standard of Performance for New Sources Using Volatile Organic Compounds	All

**Equipment**

<b>Emission Point</b>	<b>Description</b>	<b>Install Date</b>	<b>Applicable Regulations</b>	<b>Control ID</b>	<b>Release ID</b>
E7	Horizon book binder model BQ-270, rated at 11,000 book/hr. (Horizon)	11/2005	7.08, 7.25	C3	N/A
E8	Muller Martini Bravo Plus Saddle stitching machine, model 335-0400, rated at 12,000 book/hr. (Muller 2)	2007	7.08	C4	N/A
E9	Muller Bravo stitching machine, model 335-0401, rated at 12,000 book/hr. (Muller 3)	2007		C4	N/A
E10	Muller Bravo stitching machine, model 380-0400, rated at 12,000 book/hr. (Muller 4)	2007		C4	N/A
E11	Muller Bravo stitching machine, model 380-0401, rated at 12,000 book/hr. (Muller 5)	2007		C4	N/A

**Control Devices**

<b>Control ID</b>	<b>Description</b>	<b>Control Efficiency</b>
C3	Dust collection bag. (Collection bag)	98 %
C4	Centrally collecting plantwide-installed scrap recycling system consisting of a bailer, capacity of 6,111 lb/hr with cyclone and 20-bag particulate matter filtering system. (Central PM)	98 %

## U2 Specific Conditions

### S1. Standards

[Regulation 2.17, section 5.1]

#### a. Opacity

- i. The owner or operator of the Horizon binding unit (E7) and Muller stitching units (E8, E9, E10, and E11) shall not allow or cause visible emissions to exceed twenty percent (20%) opacity.  
[Regulation 7.08, section 3.1.1]

#### b. PM/PM<sub>10</sub>/PM<sub>2.5</sub>

- i. See Plantwide Requirements.
- ii. The owner or operator of the Horizon binder (E7) and Muller stitching units (E8, E9, E10, and E11) shall not allow or cause the PM emissions to exceed 2.34 lb/hr per piece of equipment.<sup>2</sup> [Regulation 7.08, section 3.1.2]

#### c. VOC

- i. See Plantwide Requirements.
- ii. The owner or operator shall limit the total VOC emission from all the equipment subject to Regulation 7.25, including Horizon book binder (E7), Stacker (IE-1/2A), gluers (IE-2B and 2C), laminator (IE-2D), platemakers (IE-2E and 2F), digital printers (IE-2G, 2H, and 2I), and ink-jet printers (IE-2J and 2K), to less than or equal to 5.0 tons per 12 consecutive month period total unless a BACT is approved.<sup>3</sup> [Regulation 7.25, section 3.1]

### S2. Monitoring and Record Keeping

[Regulation 2.17, section 5.2]

The owner or operator shall maintain the following records for a minimum of five years and make the records readily available to the District upon request.

#### a. Opacity

- i. The owner or operator shall, monthly, conduct a one-minute visible emissions survey during normal process operation to demonstrate

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<sup>2</sup> The District has determined that the PM emissions should meet the lb/hr PM emission standard uncontrolled.

<sup>3</sup> The District has determined that the total potential VOC emission from the Non-BACT equipment subject to Regulation 7.25, including Horizon book binder (E7), Stacker (IE-1/2A), gluers (IE-2B and 2C), laminator (IE-2D), platemakers (IE-2E and 2F), digital printers (IE-2G, 2H, and 2I), and ink-jet printers (IE-2J and 2K), should meet the 5 ton per 12-month standard uncontrolled.

compliance with the 20% emission opacity limit. No more than four emission points shall be observed simultaneously. The opacity surveys can be performed on the building exhaust points if the process is inside an enclosure

- ii. At emission points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist the owner or operator shall perform or cause to be performed a Method 9, in accordance with 40 CFR Part 60, Appendix A, within 24 hours of the initial observation.
- iii. The owner or operator shall maintain monthly records of the results of all visible emissions surveys and Method 9 tests performed. The records shall include the date of each VE survey, the name of the person conducting the survey, whether or not visible emissions were observed, and what if any corrective action was performed. If an emission point is not being operated during a given month, then no visible emission survey needs to be performed and a negative declaration shall be entered in the record.

**b. PM/PM<sub>10</sub>/PM<sub>2.5</sub>**

- i. See Plantwide Requirements.

**c. VOC**

- i. See Plantwide Requirements.

**S3. Reporting**

[Regulation 2.17, section 5.2]

The owner or operator shall report the following information, as required by General Condition G12:

**a. Opacity**

- i. The semi-annual report for this emission unit, must include the following information:
  - (1) The results of the monthly and consecutive 12-month VE surveys performed.
  - (2) Any deviation from the requirement to perform the required VE surveys or Method 9 tests.
  - (3) Any deviation from the requirement to record the results of each VE survey and Method 9 test performed.

- (4) The number, date, and time of each monthly VE Survey where visible emissions were observed and the results of the Method 9 test performed.
- ii. Identification of all periods of exceeding the opacity standard.
- b. PM/PM<sub>10</sub>/PM<sub>2.5</sub>**
  - i. See Plantwide Requirements.
- c. VOC**
  - i. See Plantwide Requirements.

**Emission Unit U3: Parts Washer****Applicable Regulations**

<b>FEDERALLY ENFORCEABLE REGULATIONS</b>		
<b>Regulation</b>	<b>Title</b>	<b>Applicable Sections</b>
6.18	Standards of Performance for Solvent Metal Cleaning Equipment	1 through 4

**Equipment**

<b>Emission Point</b>	<b>Description</b>	<b>Install Date</b>	<b>Applicable Regulations</b>	<b>Control ID</b>	<b>Release ID</b>
E12	Cold solvent metal cleaning, make Greymills, model PL422A, no secondary reservoir. (PW-3)	N/A	6.18	N/A	N/A

**Control Devices:**

There are no control devices associated with this equipment.

### U3 Specific Conditions

#### S1. Standards

[Regulation 2.17, section 5.1]

##### a. VOC

- i. See Plantwide Requirements.
- ii. The owner or operator shall install, maintain, and operate the control equipment as follows: [Regulation 6.18, section 4]
  - (1) The cold cleaner shall be equipped with a tightly fitting cover that is free of cracks, holes, or other defect. If the solvent is agitated or heated, then the cover shall be designed so that it can be easily operated with one (1) hand. [Regulation 6.18, section 4.1.1]
  - (2) The cold cleaner shall be equipped with a drainage facility that is designed so that the solvent that drains off parts removed from the cleaner will return to the cold cleaner. The drainage facility may be external if the District determines that an internal type cannot fit into the cleaning system. [Regulation 6.18, section 4.1.2]
  - (3) A permanent, conspicuous label summarizing the operating requirements shall be installed on or near the cold cleaner. [Regulation 6.18, section 4.1.3]
  - (4) If used, the solvent spray shall be a fluid stream, not a fine, atomized, or shower type spray, at a pressure that does not cause excessive splashing. Flushing of parts using a flexible hose or other flushing device shall be performed only within the freeboard area of the cold cleaner. Solvent flow shall be directed downward to avoid turbulence at the air-solvent interface and to prevent solvent from splashing outside the cold cleaner. [Regulation 6.18, section 4.1.4]
  - (5) Work area fans shall be located and positioned so that they do not blow across the opening of the cold cleaner. [Regulation 6.18, section 4.1.6]
  - (6) If a pump-agitated solvent bath is used, then the agitator shall be operated to produce no more than a rolling motion of solvent with no observable splashing of the solvent against the tank walls of the parts being cleaned. An air-agitated solvent bath shall not be used. [Regulation 6.18, section 4.1.7]
  - (7) The solvent-containing portion of the cold cleaner shall be free of all liquid leaks. Auxiliary cold cleaner equipment such as pumps, water separators, steam traps, or distillation units shall not have any visible liquid leaks, visible tears, or cracks. [Regulation 6.18, section 4.1.8]

- iii. The owner or operator shall observe at all times the following operating requirements: [Regulation 6.18, section 4.2]
  - (1) Waste solvent shall neither be disposed of nor transferred to another party in a manner such that more than 20% by weight of the waste solvent can evaporate. Waste solvent shall be stored only in a covered container. A covered container may contain a device that allows pressure relief, but does not allow liquid solvent to drain from the container. [Regulation 6.18, section 4.2.1]
  - (2) The solvent level in the cold cleaner shall not exceed the fill line. [Regulation 6.18, section 4.2.2]
  - (3) The cold cleaner shall be closed whenever a part is not being handled in the cold cleaner. [Regulation 6.18, section 4.2.3]
  - (4) Parts to be cleaned shall be racked or placed into the cold cleaner in a manner that will minimize drag-out losses. [Regulation 6.18, section 4.2.4]
  - (5) Cleaned parts shall be drained for at least fifteen (15) seconds or until dripping ceases, whichever is longer. Parts having cavities or bling holes shall be tipped or rotated while the part is draining. During the draining, tipping, or rotating, the parts shall be positioned so that the solvent drains directly back to the cold cleaner. [Regulation 6.18, section 4.2.5]
  - (6) A spill during solvent transfer shall be cleaned immediately, and the wipe rags or other sorbent material shall be immediately stored in a covered container for disposal or recycling, unless enclosure storage of these items is not allowed by fire protection authorities. [Regulation 6.18, section 4.2.6]
  - (7) Sponges, fabric, wood, leather, paper products, and other sorbent material shall not be cleaned in a cold cleaner. [Regulation 6.18, section 4.2.7]
- iv. The owner or operator shall not operate a cold cleaner using a solvent with a vapor pressure that exceeds 1.0 mm Hg (0.019 psi) measured at 20°C (68°F). [Regulation 6.18, 4.3.2]

**S2. Monitoring and Record Keeping**  
[Regulation 2.17, section 5.2]

The owner or operator shall maintain the following records for a minimum of five years and make the records readily available to the District upon request.

**a. VOC**

- i. See Plantwide Requirements.

- ii. The owner or operator shall maintain records that include the following for each purchase: [Regulation 6.18, section 4.4.2]
  - (1) The name and address of the solvent supplier;
  - (2) The date of the purchase,
  - (3) The type of solvent, and
  - (4) The vapor pressure of the solvent measure in mmHg at 20°C (68°F)

**S3. Reporting**

[Regulation 2.17, section 5.2]

The owner or operator shall report the following information, as required by General Condition G12:

**a. VOC**

- i. See Plantwide Requirements.

### Insignificant Activities

Equipment	Qty.	PTE (tpy)	Regulation Basis
Gammerler compensating stacker trimmer & gluer, model STC-70	1	PM <sub>10</sub> = 0.175 VOC = 0.051	Regulation 1.02, section 1.38
Stahl Pharm folder, model 1.77-36	1	PM <sub>10</sub> = 0.383	Regulation 1.02, section 1.38
Stahl 34" folder, model RF-56V2	1	PM <sub>10</sub> = 0.383	Regulation 1.02, section 1.38
Stahl 40" folder, model RF-66V2	1	PM <sub>10</sub> = 0.383	Regulation 1.02, section 1.38
Stahl Heidelberg folder, model RFH-82	1	PM <sub>10</sub> = 0.383	Regulation 1.02, section 1.38
Stahl Heidelberg folder, model RFH-66	1	PM <sub>10</sub> = 0.383	Regulation 1.02, section 1.38
Miehle Vertical die cutter, model V-50	1	PM <sub>10</sub> = 0.122	Regulation 1.02, section 1.38
MM DK cutter, model 7590	1	PM <sub>10</sub> = 0.08	Regulation 1.02, section 1.38
Perfecta cutter, model 132	1	PM <sub>10</sub> = 0.08	Regulation 1.02, section 1.38
Perfecta cutter, model 115 TVC	1	PM <sub>10</sub> = 0.08	Regulation 1.02, section 1.38
Polar cutter, model 137 EMC MON	1	PM <sub>10</sub> = 0.08	Regulation 1.02, section 1.38
Abrasive blast cabinet with bag filter system model DC1500, efficiency of 98%	1	PM <sub>10</sub> = 0.342	Regulation 1.02, section 1.38
Grafix Powder Star Duo Plus XL corn starch sprayer, model 3961236-AO6	1	PM <sub>10</sub> = 0.217	Regulation 1.02, section 1.38
Gammerler gluer, model RS111	1	VOC = 0.051	Regulation 1.02, section 1.38
HHS Installation KIT Xmelt gluer, model 45011700	1	VOC = 0.051	Regulation 1.02, section 1.38
Accufeed D&K Laminator, model 27-5415	1	VOC = 0.051	Regulation 1.02, section 1.38
Kodak platemaker, model MAGNUS 800	1	VOC = 0.056	Regulation 1.02, section 1.38
Kodak platemaker, model NE50	1	VOC = 0.056	Regulation 1.02, section 1.38
Konica Minolta Bizhub 1200 digital printer, model C364E	1	VOC=0.0032	Regulation 1.02, section 1.38
Kodak Nexpress digital printer, model S-3000	1	VOC=0.0027	Regulation 1.02, section 1.38
Kodak Nexpress digital printer, model SE-2500	1	VOC=0.0022	Regulation 1.02, section 1.38
MCS Inc. Falcon Imager ink-jet printer, model 600 Jet mail III	1	VOC=0.190	Regulation 1.02, section 1.38
MCS Inc. Array inkjet printer, model V3 9870000-821	1	VOC=0.159	Regulation 1.02, section 1.38

1. Insignificant activities identified in District Regulation 1.02, Appendix A, may be subject to size or production rate disclosure requirements.

2. Insignificant activities identified in District Regulation 1.02, Appendix A shall comply with generally applicable requirements.
3. The owner or operator shall annually submit an updated list of insignificant activities that occurred during the preceding year, with the compliance certification due April 15<sup>th</sup>.
4. Emissions from Insignificant Activities shall be reported in conjunction with the reporting of annual emissions of the facility as required by the District.
5. The owner or operator may elect to monitor actual throughputs for each of the insignificant activities and calculate actual annual emissions, or use Potential to Emit (PTE) as the annual emissions for each piece of equipment.
6. The District has determined that no monitoring, recordkeeping, or reporting requirements apply to the insignificant activities listed, except for the equipment that has an applicable regulation and permitted under an insignificant activity (IA) unit.

**Emission Unit IA1: Miscellaneous Particulate Matter Emitting Equipment****Applicable Regulations**

<b>FEDERALLY ENFORCEABLE REGULATIONS</b>		
<b>Regulation</b>	<b>Title</b>	<b>Applicable Sections</b>
7.08	Standards of Performance for New Process Operations	1, 2, 3

**Equipment**

<b>Emission Point</b>	<b>Description</b>	<b>Install Date</b>	<b>Applicable Regulations</b>	<b>Control ID</b>	<b>Release ID</b>
IE-1/2A	Gammerler compensating stacker trimmer& gluer, model STC-70 <sup>4</sup>	N/A	7.08, 7.25	N/A	N/A
IE-1B	Stahl Pharm folder, model 1.77-36	N/A	7.08	N/A	N/A
IE-1C	Stahl 34" folder, model RF-56V2	N/A	7.08	N/A	N/A
IE-1D	Stahl 40" folder, model RF-66V2	N/A	7.08	N/A	N/A
IE-1E	Stahl Heidelberg folder, model RFH-82	N/A	7.08	N/A	N/A
IE-1F	Stahl Heidelberg folder, model RFH-66	N/A	7.08	N/A	N/A
IE-1G	Miehle Vertical die cutter, model V-50	N/A	7.08	N/A	N/A
IE-1H	MM DK cutter, model 7590	N/A	7.08	N/A	N/A
IE-1I	Perfecta cutter, model 132	N/A	7.08	N/A	N/A
IE-1J	Perfecta cutter, model 115 TVC	N/A	7.08	N/A	N/A
IE-1K	Polar cutter, model 137 EMC MON	N/A	7.08	N/A	N/A
IE-1L	Abrasive blast cabinet, make Cyclone Engineering, model 3624, capacity 25 lb/hr	N/A	7.08	C5	N/A
IE-1M	Corn starch sprayer, make Grafix Powder Star Duo Plus XL, model 3961236-AO6	N/A	7.08	N/A	N/A

**Control Devices:**

<b>Control ID</b>	<b>Description</b>	<b>Control Efficiency</b>
C5	Bag filter system, model DC1500	98%

<sup>4</sup> This equipment has PM and VOC emissions. Therefore, it is subject to PM requirements (Regulation 7.08) under emission unit IA1 and VOC requirements (Regulation 7.25) under emission unit IA2.

## IA1 Specific Conditions

### S1. Standards

[Regulation 2.17, section 5.1]

#### a. Opacity

- i. The owner or operator shall not allow visible emissions to equal or exceed 20% opacity. [Regulation 7.08, section 3.1.1]

#### b. PM/PM<sub>10</sub>/PM<sub>2.5</sub>

- i. See Plantwide Requirements.
- ii. The owner or operator shall not allow or cause the PM emissions to exceed 2.34 lb/hr per piece of equipment, based on actual operating hours in a calendar day.<sup>5</sup> [Regulation 7.08, section 3.1.2]

### S2. Monitoring and Record Keeping

[Regulation 2.17, section 5.2]

The owner or operator shall maintain the following records for a minimum of five years and make the records readily available to the District upon request.

#### a. Opacity

- i. There are no opacity compliance monitoring or record keeping requirements for the above listed equipment.

#### b. PM/PM<sub>10</sub>/PM<sub>2.5</sub>

- i. See Plantwide Requirements.

### S3. Reporting

[Regulation 2.17, section 5.2]

The owner or operator shall report the following information, as required by General Condition G12:

#### a. Opacity

- i. There are no opacity reporting requirements for the above listed equipment.

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<sup>5</sup> The potential uncontrolled PM emissions should meet the applicable lb/hr PM emission standard uncontrolled.

**b. PM/PM<sub>10</sub>/PM<sub>2.5</sub>**

- i.** See Plantwide Requirements.

**Emission Unit IA2: Miscellaneous VOC Emitting Equipment****Applicable Regulations**

<b>FEDERALLY ENFORCEABLE REGULATIONS</b>		
<b>Regulation</b>	<b>Title</b>	<b>Applicable Sections</b>
7.25	Standard of Performance for New Sources Using Volatile Organic Compounds	All

**Equipment**

<b>Emission Point</b>	<b>Description</b>	<b>Install Date</b>	<b>Applicable Regulations</b>	<b>Control ID</b>	<b>Release ID</b>
IE-1/2A	Gammerler compensating stacker trimmer & gluer, model STC-70 <sup>6</sup>	N/A	7.08, 7.25	N/A	N/A
IE-2B	Gammerler gluer, model RS111	N/A	7.25	N/A	N/A
IE-2C	HHS Installation KIT Xmelt gluer, model 45011700	N/A	7.25	N/A	N/A
IE-2D	Accufeed D&K Laminator, model 27-5415	N/A	7.25	N/A	N/A
IE-2E	Kodak platemaker, model MAGNUS 800	N/A	7.25	N/A	N/A
IE-2F	Kodak platemaker, model NE50	N/A	7.25	N/A	N/A
IE-2G	Konica Minolta Bizhub 1200 digital printer, model C364E	N/A	7.25	N/A	N/A
IE-2H	Kodak Nexpress digital printer, model S-3000	N/A	7.25	N/A	N/A
IE-2I	Kodak Nexpress digital printer, model SE-2500	N/A	7.25	N/A	N/A
IE-2J	MCS Inc. Falcon Imager ink-jet printer, model 600 Jet mail III	N/A	7.25	N/A	N/A
IE-2K	MCS Inc. Array inkjet printer, model V3 9870000-821	N/A	7.25	N/A	N/A

**Control Devices:**

There are no control devices associated with this equipment.

<sup>6</sup> This equipment has PM and VOC emissions. Therefore, it is subject to PM requirements (Regulation 7.08) under emission unit IA1 and VOC requirements (Regulation 7.25) under emission unit IA2.

## IA2 Specific Conditions

### S1. Standards

[Regulation 2.17, section 5.1]

#### a. VOC

- i. See Plantwide Requirements.
- ii. The owner or operator shall limit the total VOC emission from all the equipment subject to Regulation 7.25, including Horizon book binder (E7), Stacker (IE-1/2A), gluers (IE-2B and 2C), laminator (IE-2D), platemakers (IE-2E and 2F), digital printers (IE-2G, 2H, and 2I), and ink-jet printers (IE-2J and 2K), to less than or equal to 5.0 tons per 12 consecutive month period total unless a BACT is approved.<sup>7</sup> [Regulation 7.25, section 3.1]

### S2. Monitoring and Record Keeping

[Regulation 2.17, section 5.2]

The owner or operator shall maintain the following records for a minimum of five years and make the records readily available to the District upon request.

#### a. VOC

- i. See Plantwide Requirements.

### S3. Reporting

[Regulation 2.17, section 5.2]

The owner or operator shall report the following information, as required by General Condition 12:

#### a. VOC

- i. See Plantwide Requirements.

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<sup>7</sup> The District has determined that the total potential VOC emission from the Non-BACT equipment subject to Regulation 7.25, including Horizon book binder (E7), Stacker (IE-1/2A), gluers (IE-2B and 2C), laminator (IE-2D), platemakers (IE-2E and 2F), digital printers (IE-2G, 2H, and 2I), and ink-jet printers (IE-2J and 2K), should meet the 5 ton per 12-month standard uncontrolled.

**Source-Wide Equipment Not Regulated**

<b>No.</b>	<b>Equipment</b>	<b>Determination Basis</b>
1	Maintenance soldering equipment (2), maintenance welding equipment (1)	EPA White Papers
2	Maintenance woodworking equipment	EPA White Papers

### Attachment A – Calculation Methodologies and Emission Factors

Emissions are calculated by multiplying the throughput (ton, MMCF, gallons, etc) or hours of operation of the equipment by the appropriate emission factor and 1 minus any control device's efficiency. The following emission factors and calculation methodology shall be used unless other methods or emission factors are approved in writing by the District.

Unit ID	Emission Point Description	Pollutants	Emission Factors Unit	Uncontrolled Emission Factors	Controlled Emission Factors	Emission Factor Sources	Projected Retest Date Prior to...
U1	Lithographic printing presses (E1 – E6)	VOC/HAP	Mass balance method based on actual ink and solvent usage <sup>1</sup>				
U2	Book Binder (E7)	PM/PM <sub>10</sub> /PM <sub>2.5</sub>	lb/1,000 books	0.17	0.0034	Engineering Judgement	
	Stitching Machines (E8 – E11)	PM/PM <sub>10</sub> /PM <sub>2.5</sub>	lb/1,000 books	0.17	0.0034	Engineering Judgement	
U3	Parts washer (E12)	VOC/HAP	Mass balance method based on actual cleaner usage				
IA1	Stack trimmer (IE-1/2A)	PM/PM <sub>10</sub> /PM <sub>2.5</sub>	lb/hr	0.040		Engineering Judgement	
	Folders (IE-1A through IE-1F)	PM/PM <sub>10</sub> /PM <sub>2.5</sub>	lb/hr	0.086		Engineering Judgement	
	Die cutter (IE-1G)	PM/PM <sub>10</sub> /PM <sub>2.5</sub>	lb/hr	0.028		Engineering Judgement	
	Cutters (IE-1H through IE-1K)	PM/PM <sub>10</sub> /PM <sub>2.5</sub>	lb/hr	0.018		Engineering Judgement	
	Blast cabinet (IE-1L)	PM/PM <sub>10</sub> /PM <sub>2.5</sub>	lb/hr	PM=0.162 PM <sub>10</sub> =0.078 PM <sub>2.5</sub> =0.0078		AP-42, 13.2.6	
	Starch sprayer (IE-1M)	PM/PM <sub>10</sub> /PM <sub>2.5</sub>	lb/hr	0.099		Engineering Judgement	
IA2	Gluers (IE-1/2A, 2B, 2C)	VOC	Mass balance method based on actual glue usage				
	Laminator (IE-2D)	VOC	Mass balance method based on actual glue usage				
	Platemakers (IE-2E and 2F)	VOC	Mass balance method based on actual solvent usage				
	Digital printers (IE-2G, 2H, 2I)	VOC	lb/ton dry ink used	3.15		Journal of A&WMA, 1999	
	Ink-jet printers (IE-2J, 2K)	VOC	Mass balance method based on actual ink usage				

1. The emissions from lithographic presses are based on VOC and HAP content of the materials used. VOC emissions shall be calculated according to the following methodology, unless the District approves an alternative method in writing.

#### Heat-set Web Press

$$E_{VOC} = [(I_{voc})(I_{Ret})(C_{HI}) + (FS_{voc})(C_{FS}) + (BW_{voc})(C_{BW})](CE) + [(0.05)(I_{voc})] + [(0.30)(FS_{voc})] + [(0.60)(BW_{voc})] + [N_{voc}(R)] + Et_{voc} + [(M_{VOC})(R)]$$

$E_{VOC}$	=	lbs VOC Emissions
$I_{voc}$	=	lbs of heatset ink used X weight % VOC in heat-set ink.
$I_{Ret}$	=	0.80 (1-Ink oil retention factor of 0.20 for heatset inks)
$C_{HI}$	=	0.95 (Capture Efficiency for heatset Ink)
$FS_{voc}$	=	Qty of fountain sol'n used (gal) X VOC content (lbs/gal) <ul style="list-style-type: none"> <li>• solution reservoir temperature shall be maintained at or below 60°F</li> </ul>
$C_{FS}$	=	0.70 (Capture Efficiency for fountain solution using alcohol substitutes)
$BW_{voc}$	=	Qty of blanket wash used (gallons) X VOC content (lbs/gal) <ul style="list-style-type: none"> <li>• vapor pressure &lt; 10mm Hg at 68°F</li> </ul>
$C_{BW}$	=	0.40 (Capture Efficiency for Blanket Wash)
$CE$	=	Control Efficiency (if applicable), CTO - 95%, RTO - 99%
$N_{voc}$	=	Qty of naphtha used (gallons) X VOC content (lbs/gal)
$Et_{voc}$	=	Qty of etch used (gallons) X VOC content (lbs/gal)
$M_{VOC}$	=	Quantity of mineral spirits (gal) X VOC content (lbs/gal)
$R$	=	1.00 or 0.50 (Fraction of cleanup solvent unrecovered) <ul style="list-style-type: none"> <li>• vapor pressure &lt; 10mm Hg at 68°F</li> </ul>

#### Sheet-fed Press

$$E_{VOC} = (I_{voc})(I_{Ret}) + FS_{voc} + BW_{voc} + N_{voc}(R) + M_{VOC}(R) + Et_{voc}$$

$E_{VOC}$	=	lbs VOC Emissions
$I_{voc}$	=	lbs of sheet-fed ink used X weight % VOC in ink (0.18 maximum)
$I_{Ret}$	=	0.05 (1 - Ink oil retention factor of 0.95 for sheet-fed inks)
$FS_{voc}$	=	Qty of fountain sol'n Used (gal) x VOC content (lbs/gal) <ul style="list-style-type: none"> <li>• solution reservoir temperature shall be maintained at or below 60°F</li> </ul>
$BW_{voc}$	=	Qty of blanket wash used (gallons) x VOC content (lbs/gal) <ul style="list-style-type: none"> <li>• vapor pressure &lt; 10mm Hg at 68°F</li> </ul>
$N_{voc}$	=	Qty of naphtha used (gallons) x VOC content (lbs/gal)
$M_{VOC}$	=	Quantity of mineral spirits (gal) X VOC content (lbs/gal)
$Et_{voc}$	=	Qty of etch used (gallons) x VOC content (lbs/gal)
$R$	=	1.00 or 0.50 (Fraction of cleanup solvent unrecovered) <ul style="list-style-type: none"> <li>• vapor pressure &lt; 10mm Hg at 68°F</li> </ul>

**Fee Comment**

1. V.G. Reed is required to pay the annual FEDOOP operating fee.